

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

R00008LA
Revision 1
Siller Helicopters

SH-3A

September 18, 2003

TYPE CERTIFICATE DATA SHEET NO. R00008LA

This data sheet, which is a part of the Type Certificate R00008LA, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Siller Helicopters
1250 Smith Road
Yuba City, CA 95991

Type Certificate Ownership Record: N/A

I - Model SH-3A (S-61A) (Restricted Category Military Surplus Rotorcraft) Approved July 21, 2000 (See NOTES Section).

Engines (2) General Electric T58-GE-100. (Optional Engines See Note 12)

Fuel Aviation Kerosene, JP4 or JP5 (General Electric Co. Spec. No. D50T1011 or subsequent revisions thereto).

Engine Limits Sea Level Static - Standard Day (See Note 13)

	Torque (% Q)	Power Turbine Speed (% N _P)	Gas Generator Speed (% N _G)	Power Turbine Inlet Temp. (T ₅)
Takeoff				
T58-GE-100 (5 Min.)	103	112	100.0	696° C
One Engine Inoperative				
T58-GE-100 (30 Min.)	123	112	100.0	696° C
(2-1/2 Min.)	123	112	102.0	721° C
Maximum Continuous (See Note 14)				
T58-GE-100	86	112	100.0	660° C
Max. Transient (2 Sec.)	NA	NA	NA	840° C
Starting Allowable Max. (2 Sec.)	NA	NA	NA	950° C
Overspeed (15 Sec.)	(Note 15)	122	105.0	NA

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Rotor Limits	Max. 225 r.p.m. (112%) Min. 184 r.p.m. (91%)
Transmission Torque Limits	<u>Single Engine Operation</u> Transient torque meter readings from 112% to 130%, not to exceed 5 seconds. Transient torque meter readings above 130% are not permissible. <u>Dual Engine Operation</u> Transient torque meter readings from 95% to 112%, not to exceed 5 seconds. Transient torque meter readings above 112% are not permissible.
Airspeed Limits	V _{ne} (Never exceed) speed 155 m.p.h. (130 knots) CAS.
C.G. Range	(+258.0) to (+259.6) at 19,100 lbs. to 22,000 lbs., Forward Limit (+276.0) to (+275.2) at 19,100 lbs. to 22,000 lbs., Aft Limit (+254.0) to (+280.0) at 16,000 lbs. or less. Straight Line Variation Between Points Given. (See chart.)
Empty Weight C.G. Range	None
Datum	267.4 in. forward of main rotor centroid.
Leveling Means	Leveling plates on sill and upper frame of cargo door.
Maximum Weight	19,100 lbs., see Note 18.
Minimum Crew	2 - Pilot and Copilot.
Number of Seats	2 - 2 at (+149.0)
Maximum Cargo	See Note 17.
Fuel Capacity	700 gal. (347 gal. at 215.3, 353 gal. at 317.3).
Oil Capacity	6.0 gal. (2 tanks 3 gal. each at 181.0).
Rotor Blade & Control Movements	For rigging information, see Note 3.
Serial No.'s Approved	Refer to Siller Helicopters Serial Numbers Eligible Report No. SH61001, NC, dated July 21, 2000, or later FAA approved revision. A current copy is on file at the Los Angeles ACO.
Certification Basis	FAR 21.25(a)(2) effective February 1, 1965, with Amendments 21-1 through 21-42. Type Certificate No. R00008LA issued July 21, 2000 for the Special Purpose(s) of:

Certification Basis (cont'd)

(1) Agricultural Operations under FAR 21.25(b)(1).

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for agricultural operations excepted by FAR 36.1(a)(4) and defined under FAR 137.3

(2) Forest and Wildlife Conservation Operations under FAR 21.25(b)(2).

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for dispensing fire fighting materials excepted by FAR 36.1(a)(4) and defined under FAR 137.3

(3) External Load Operations under FAR 21.25(b)(7).

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for external load operations excepted by FAR 36.1(a)(4) and defined under FAR 133.1(b).

Any alteration to the aircraft for Special Purposes not identified above require further FAA approval and in addition may require noise and / or flight testing.

General Note: Any subsequent modifications to the helicopters type certified under this Type Certificate are to have the certification basis for that modification established under 14 CFR 21.101 published June 7, 2000 which became effective June 10, 2003. Otherwise non-significant modifications are to meet the requirements of [CAR 7 airworthiness standards, transport category, including Amendment 7-4, effective October 1959, plus special conditions for turbine engine installations and 14 CFR 29.1529, Instructions for Continued Airworthiness, Amendment 20, effective September 11, 1980.](#)

Date of Application

August 18, 1997

Production Basis

None. No helicopter may be produced under this approval. Prior to adding serial numbers to this Type Certificate, each candidate helicopter must undergo a conformity inspection. The conformity inspection will be conducted in accordance with a Type Inspection Authorization, Part 1, or request for conformity that will include as a minimum, the inspections contained in the FAA Rotorcraft Directorate Restricted Category conformity document dated September 25, 2001 or later FAA approved revisions.

Equipment

Equipment necessary for the particular special purpose operation must be installed.

NOTES

NOTE 1

A current weight and balance report including a list of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification. Refer to Siller Helicopters RFM Supplement No. SH61005, "Rotorcraft Operator's Manual Supplement to Navy Model SH-3A Helicopter With GE T58-GE-5/-10/-100 and CT58-140-1 Engines", N.C., dated July 17, 2000, or later FAA approved revisions, for C.G. determination.

NOTE 2

The following placards must be prominently displayed in the cockpit in full view of the pilots.

Placard No. 1

"THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313."

Placard No. 2

"THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER OPERATORS MANUAL. REFER TO U.S. NAVY NAVAIR 01-230HLC-1, CHAPTER 4, FOR OPERATING LIMITS AND RESTRICTIONS."

Placard No. 3

"VFR OPERATIONS ONLY."

The builder's data plate required by FAR 45.13 must be installed in accordance with drawing SH-76, N.C., dated April 21, 1998 or later FAA approved revisions.

NOTE 3

The helicopter(s) must be serviced, maintained, inspected, repaired, and overhauled in accordance with the documents specified in Siller Helicopters Instructions for Continued Airworthiness Maintenance Report No. SH61003, NC, dated January 7, 1998, or later FAA approved revisions or inspected in accordance with other FAA accepted inspection programs. The TC holder's Instructions for Continued Airworthiness Report is part of the TC holder's Instructions for Continued Airworthiness.

NOTE 4

Prior to obtaining an original Airworthiness Certificate:

- (A) Each helicopter must pass a conformity inspection in accordance with Siller Helicopters Engineering Report No. SH61002, NC, dated January 7, 1998, or later FAA approved revision. The Engineering Report also identifies the special purpose modification(s) accomplished on that particular helicopter. The Engineering Report identifies military airframe changes (AFC) accomplished on the helicopter. In addition, each helicopter must pass an inspection for any possible hidden damage and the military records reviewed for acceptability of any repairs or alterations.
- (B) The maintenance, overhaul and modification records of each helicopter must be reviewed for military changes that may affect the airworthiness of the helicopter.
- (C) After the required inspections, the aircraft must be found to be in a good state of preservation, repair, and in a condition for safe operation.

- NOTE 5 This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft owner/operator's business which is other than air transportation.
- NOTE 6 Restricted Category aircraft may not be operated in a foreign country without the express written approval of that country.
- NOTE 7 This aircraft has not been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation.
- NOTE 8 Engine changes are allowed provided the replacement engine is of the same make and model as identified in this TCDS. The replacement engine must have proper records and have the applicable FAA Airworthiness inspection accomplished.
- NOTE 9 The Airworthiness Directives for the helicopter and engines contained in Siller Helicopters Airworthiness Directives Compliance Report No. SH61007 dated January 7, 1998, or later FAA approved revisions, must be complied with prior to original airworthiness certification.
- NOTE 10 The service life limited parts overhaul and retirement intervals for these helicopters is specified in Siller Helicopters Instructions For Continued Airworthiness Report, Report No. SH61003, N.C., dated January 7, 1998, or later FAA approved revisions.
- NOTE 11 The helicopter must be operated in accordance with a Flight Manual comprised of the following:
- 1) Dept. of the Navy, "NATOPS Flight Manual, Navy Model SH-3G, HH-3A, UH-3A Helicopters", NAVAIR 01-230HLC-1, Original, dated September 15, 1988.
 - 2) Siller Helicopters RFM Supplement No. SH61005, "Rotorcraft Operator's Manual Supplement to Navy Model SH-3A Helicopter With GE T58-GE-5/-10/-100 and CT58-140-1 Engines", NC, dated July 17, 2000.
- NOTE 12 Optional Engine Installation: (2) General Electric CT58-140-1 (with Hamilton Standard Fuel Control JFC-26). (See NOTE 15). (2) General Electric T58-GE-5; (2) General Electric T58-GE-10.
- NOTE 13 Installation of all engine models require:
- a. All engine operating limits standardized and derated to the General Electric CT58-140-1.
 - b. Main gearbox part number S6135-20600-27, -33, -39 and subsequent installed.
 - c. Left engine cowl inst., part number S6130-80050 modified for increased cooling provisions per Sikorsky Service Instructions No. 61-3A.
 - d. Tail pipe assembly, part number S6130-80169-1, installed (bolt on versus clamp).
 - e. Tube installation - air bleed dump RH, part number S6120-62342-6, installed.
 - f. Engine Inlet Duct Assy. S6130-80165 installed.

- NOTE 14 Maximum continuous total power for two-engine operation is limited to 2100 hp.
- NOTE 15 Torque may exceed 103 percent Q on one engine to a maximum of 123 percent, provided that the power of the other is reduced so that total torque for both engines does not exceed 206 percent Q for 30 minutes or 172 percent continuously, and that the single engine N_g , T_5 and Q limits are not exceeded. The governing parameter is the limit which occurs first.
- NOTE 16 If takeoff power (CT58-140-1) is used in cumulative excess of 5 minutes during any one emergency, the engine must be inspected in accordance with GE Commercial Maintenance Manual SEI-182, Revision 8 dated December 31, 1996 or later FAA approved revision.
- NOTE 17 Provisions for the carriage of external loads are available in the form of structural hard points on the fuselage and single point hook. Information concerning the operating limitations with this equipment is contained in the Flight Manual.
- NOTE 18 Maximum takeoff and landing weight is 19,100 lbs., except in FAR 133 rotorcraft-external load operations where the maximum rotorcraft-load combination weight is 22,000 lbs. The external load must be jettisonable so that the rotorcraft weight is not more than 19,100 lbs.
- NOTE 19 Any alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. These instructions must be submitted and accepted by FTW-AEG, Aircraft Evaluation Group Office, prior to approval for return to service.
- NOTE 20 This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft owners/operator's business which is other than air transportation.
- NOTE 21 Restricted category aircraft may not be operated in a foreign country without express written approval of that country.
- NOTE 22 This aircraft has not been shown to meet the requirements of the applicable comprehensive and detailed Airworthiness Code as provided by Annex 8 to the Convention on International Civil Aviation.
- NOTE 23 Any alteration to the type design of this aircraft may require Instructions For Continued Airworthiness. These instructions must be submitted to and accepted by the FTW-AEG, Aircraft Evaluation Group Office prior to approval for return to service.
- NOTE 24 No Person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.

END